Abstract of the Disclosure

A laboratory tempering device for jointly tempering reaction samples in at least two steps in assigned, specified temperature ranges, which are repeatedly carried out consecutively as sequences of steps, the laboratory tempering device, in a randomly selected first step, at the sequence bringing several first groups of samples, in each case containing at least one sample, to temperatures, which are the same within the group and different between the groups within the first temperature range assigned to the first step, wherein, in a randomly selected step of the sequence, if the reaction product is affected by the two steps with regard to identical evaluation parameters, for at least one of the first groups at least two of the samples belong to different groups, which are brought to temperatures, which are the same within the groups and different between the groups, within the temperature range assigned to the second step, and, if the evaluation parameters are different, at least two random samples belong to different third groups, which are brought to temperatures, which are the same within groups and different between groups, within the second temperature range assigned to the second step.